29. A semiconductor light emitting device comprising a base, a semiconductor light emitting element secured to the base, and a coating material for covering the semiconductor light emitting element,

wherein said coating material is a polymetaloxane or a ceramic having a light permeability, said coating material is a glass formed mainly based on the metaloxane bond.

30. A semiconductor light emitting device comprising a base, a semiconductor light emitting element secured to the base, and a coating material for covering the semiconductor light emitting element,

wherein said coating material is a polymetaloxane or a ceramic having a light permeability, said coating material is a coating member in the gel state formed mainly based on the siloxane bond. polysiloxane

31. A semiconductor light emitting device of any one of the claim 29 or 30, wherein said coating material comprises a polymetaloxane formed from a metal alcoxide.

32. A semiconductor light emitting device of claim 30, wherein said coating material comprises a polymetaloxane formed by applying the sol-gel technique to a metal alcoxide.

33. A semiconductor light emitting device of claim 29 or 30, wherein said coating material comprises a polymetaloxane formed by hydrolyzing and polymerizing a metal alcoxide or a solution containing a metal alcoxide in accordance with the sol-gel technique.

34. A semiconductor light emitting device of claim 31, wherein said metal alcoxide is of one or more type selected from a single-metal alcoxide, a two-metal alcoxide and a multi-metal alcoxide.

35. A semiconductor light emitting device comprising a base, a semiconductor light emitting element secured to the base, and a coating material for covering the semiconductor light emitting element,

wherein said coating material is a polymetaloxane or a ceramic having a light permeability, said coating material comprises a ceramic formed from a ceramic precursor.

36. A semiconductor light emitting device of claim 35, wherein said ceramic precursor is a polysilazane.

37. A semiconductor light emitting device comprising a base, a semiconductor light emitting element secured to the base, and a coating material for covering the semiconductor light emitting element,

wherein said coating material is a polymetaloxane or a ceramic having a light permeability, and said coating material comprises a ceramic formed by applying a heat treatment to a ceramic precursor.

38. A semiconductor light emitting device of claim 29, wherein said coating material covers at least the top of said semiconductor light emitting element.

39. A semiconductor light emitting device of claim 38, wherein said coating material covers all the surfaces of said semiconductor light emitting element excluding the bottom surface thereof.

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40. A semiconductor light emitting device of claim 29, wherein said base has a concavity filled with said coating material.

41. A semiconductor light emitting device of claim 29, wherein said base is an insulative substrate.

42. A semiconductor light emitting device of claim 29, wherein said base is a lead frame.

43. A semiconductor light emitting device of any one of the claims 29, 30, 32 and 34-42, wherein said semiconductor light emitting element emits light at light wavelengths of 365 nm to 550 nm.

44. A semiconductor light emitting device of claim 43, wherein said semiconductor light emitting element comprises a gallium nitride compound semiconductor light emitting element.

45. A semiconductor light emitting device of any one of the claim 29 or 30, wherein said semiconductor light emitting element is secured to said base through an adhesive formed from a polymetaloxane or a ceramic.

46. A semiconductor light emitting device of claim 43, wherein said adhesive and said coating material are formed by using the same material.

47. A semiconductor light emitting device of any one of the claims 29, 30, 32, 34-42, 44 and 46, wherein said coating material contains a fluorescent substance for receiving at least a part of the light projected from said semiconductor light emitting element to perform wavelength-conversion of the light.

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48. A semiconductor light emitting device of claim 47, wherein said fluorescent substance absorbs at least a part of the light projected from said semiconductor light emitting element, and emits light having a wavelength longer than that of the light projected.

49. A semiconductor light emitting device of claim 47, wherein the light projected from said semiconductor light emitting element is mixed with the light wavelength-converted by said fluorescent substance to release the mixed light out of said coating material.

50. A semiconductor light emitting device of claim 48, wherein the light projected from said semiconductor light emitting element is mixed with the light wavelength-converted by said fluorescent substance to release the mixed light out of said coating material.

51. A semiconductor light emitting device of any one of the claims 29, 30, 32, 34-42, 44, 46, 48, 49 and 50, wherein said coating material is covered with an encapsulant.

52. A semiconductor light emitting device of claim 51, wherein said encapsulant is formed of a plastic which contains a light scattering material or a binder.

53. A semiconductor light emitting device of claim 52, wherein the light projected from said semiconductor light emitting element permeates said coating material before being released to the outside of said encapsulant.

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54. A semiconductor light emitting device of claim 51, wherein said encapsulant is fitted into said concavity, and said coating material is formed between the bottom surface of said concavity and said encapsulant.

55. A semiconductor light emitting device of claim 52, wherein said encapsulant is fitted into said concavity, and said coating material is formed between the bottom surface of said concavity and said encapsulant.

56. A semiconductor light emitting device of claim 53, wherein said encapsulant is fitted into said concavity, and said coating material is formed between the bottom surface of said concavity and said encapsulant.

57. A semiconductor light emitting device of claim 29, wherein a concavity is formed in one principal surface of an insulative substrate for constituting said base; said semiconductor light emitting element is secured to the bottom surface of the concavity; and a pair of electrodes in said semiconductor light emitting element is electrically connected to a pair of external terminals formed on the one principal surface of said insulative substrate.

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58. A semiconductor light emitting device of claim 30, wherein a lead frame for constituting said base has a pair of external terminals; a concavity is formed in either of said external terminals; said semiconductor light emitting element is secured to the bottom surface of the concavity; and a pair of electrodes of said semiconductor light emitting element is electrically connected to said pair of external terminals.

59. (New) A semiconductor light emitting device comprising a base having first and second external terminals, a semiconductor light emitting element secured to said base, and a light-permeable coating material for covering said semiconductor light emitting element, said semiconductor light emitting element comprising electrodes electrically connected respectively to said first and second external terminals,

wherein said coating material is selected from one of the following:

(1) a glass of a polymetaloxane formed mainly based on the metaloxane bond,

(2) a gel of a polymetaloxane, and

(3) a ceramic formed from a ceramic precursor; and said coating material adheres directly to the semiconductor light emitting element and electrodes.

60. (New) A semiconductor light emitting device of claim 59, wherein polymetaloxane of said coating material is formed from a metal alcoxide.

61. (New) A semiconductor light emitting device of claim 60, wherein said metal alcoxide is of one or more

type selected from a single-metal alcoxide, a two-metal alcoxide and a multi-metal alcoxide.

62. A semiconductor light emitting device of claim 59, wherein said ceramic precursor is a polysilazane.

63. (New) A semiconductor light emitting device of claim 62, wherein ceramic of said coating material is formed by applying a heat treatment to the ceramic precursor.

64. (New) A semiconductor light emitting device of claim 59, wherein said coating material covers all the surfaces of said semiconductor light emitting element excluding the bottom surface thereof.

65. (New) A semiconductor light emitting device of claim 59, wherein said base has a concavity filled with said coating material.

66. (New) A semiconductor light emitting device of claim 59, wherein said base is an insulative substrate or a lead frame.

67. (New) A semiconductor light emitting device of claim 59, wherein said semiconductor light emitting element emits light at light wavelengths of 365 nm to 550 nm.

68. (New) A semiconductor light emitting device of claim 67, wherein said semiconductor light emitting element comprises a gallium nitride compound semiconductor light emitting element.

69. (New) A semiconductor light emitting device of claim 59, wherein said semiconductor light emitting element is secured to said base through an adhesive formed from a polymetaloxane or a ceramic.

70. (New) A semiconductor light emitting device of claim 69, wherein said adhesive and said coating material are formed by using the same material.

71. (New) A semiconductor light emitting device of claim 59, wherein said coating material contains a fluorescent substance for receiving at least a part of the light projected from said semiconductor light emitting element to perform wavelength-conversion of the light.

72. (New) A semiconductor light emitting device of claim 71, wherein said fluorescent substance absorbs at least a part of the light projected from said semiconductor light emitting element, and emits light having a wavelength longer than that of the light projected.

73. (New) A semiconductor light emitting device of claim 72, wherein the light projected from said semiconductor light emitting element is mixed with the light wavelength-converted by said fluorescent substance to release the mixed light out of said coating material.

74. (New) A semiconductor light emitting device of claim 59, wherein said coating material is covered with an encapsulant.

75. (New) A semiconductor light emitting device of claim 74, wherein said encapsulant is formed of a plastic which contains a light scattering material or a binder.

76. (New) A semiconductor light emitting device of claim 75, wherein the light projected from said semiconductor light emitting element permeates said coating material before being released to the outside of said

encapsulant.

77. (New) A semiconductor light emitting device of claim 76, wherein said encapsulant is fitted into said concavity, and said coating material is formed between the bottom surface of said concavity and said encapsulant.

78. (New) A semiconductor light emitting device of claim 59, wherein a concavity is formed in one principal surface of an insulative substrate for constituting said base; said semiconductor light emitting element is secured to the bottom surface of the concavity; and a pair of said electrodes in said semiconductor light emitting element is electrically connected to a pair of said external terminals formed on the one principal surface of said insulative substrate.

79. (New) A semiconductor light emitting device of claim 59, wherein a lead frame for constituting said base has a pair of said external terminals; a concavity is formed in either of said external terminals; said semiconductor light emitting element is secured to the bottom surface of the concavity.